

REMARKS

The claims 1-20 and 22 are pending. In this amendment, the claims 1, 3, 8, 9, 11, 13, 14, 18-20, and 22 are amended. In this amendment, the claim 21 is canceled without prejudice or disclaimer of its subject matter.

The non-final Office action (Paper No. 8) mailed 25 June 2003 provided by the Examiner has been read and given careful consideration. In Paper No. 8, the Examiner relies on the following two references:

- * U.S. Patent No. 5,350,967 issued to Chen (hereinafter abbreviated as “Chen” or “Chen '967”)
- * U.S. Patent No. 4,374,341 issued to Say (hereinafter abbreviated as “Say” or “Say '341”)

As shown in Paper No. 8, the status of the claims is as follows:

- * Claims 1-4, 8-10, 13, and 18-21 are rejected “under 35 U.S.C. 103(a) as being anticipated by Chen (US Pat. 5,350,967) in view of Say (US Pat. 4,374,341)” (Paper No. 8, p. 2)
- * Claims 5-7, 11, 12, 14-17, and 22 are objected to, but would be allowable if rewritten in independent form including the features of the base claim and any intervening claims (Paper No. 8, p. 3)

The Examiner acknowledges receipt of all of the certified copies of the priority documents submitted under 35 U.S.C. § 119(a)-(d) (Paper No. 8, p. 1). The Examiner asserts that the drawings filed on 2 January 2002 are accepted (Paper No. 4, p. 1).

A. CLAIMS 11, 12, 14-17, and 22

In Paper No. 8, the Examiner objected to claims 11, 12, 14-17, and 22 as being dependent upon a rejected base claim. The Applicants respectfully submit that the claims 11, 12, 14-17, and 22, as amended, are allowable because claims 11, 14, and 22 have been rewritten in independent form to include features of the rejected base claim and any intervening claims.

The claim 11, as amended, incorporates the features of the original base claim 1. The claim 12 depends from the claim 11, as amended. The claim 14, as amended, incorporates the features of the original base claim 13. The claims 15-17 depend from the claim 14, as amended. The claim 22, as amended, incorporates the features of the original base claim 20.

Accordingly, in view of the foregoing, the claims 11, 12, 14-17, and 22 are respectfully believed to be allowable.

B. CLAIMS 5-7

In Paper No. 8, the Examiner objected to claims 5-7 as being dependent upon a rejected base claim. The claim 1 is the base claim of claims 5-7. In this response to Paper No. 8, the

Applicants do not rewrite claims 5-7 in independent form because it is respectfully believed that the base claim 1, as amended, sets forth patentable subject matter without requiring any further amendment. The Applicants respectfully request that the PTO hold the decision regarding claims 5-7 in abeyance until the PTO considers the remarks and amendments presented herein.

D. CLAIMS 1-10, 13, and 18-20

1. Claims 1-10

The Examiner rejects claim 1 “under 35 U.S.C. 103(a) as being anticipated by Chen ... in view of Say” (Paper No. 8, p. 2). The Applicants have amended claim 1 to incorporate at least some of the features set forth in claim 3.

The Applicants respectfully submit that claim 1, as amended, is patentable over the Examiner's proposed combination of Chen and Say because that combination does not teach or suggest “the first hole portion having a shape selected from among circular and elongated” as set forth in lines 7-8 of claim 1, as amended. The Applicants respectfully believe that the claims 2-10 are allowable over the cited art because those claims depend from claim 1, and because they set forth features not taught or suggested by the Examiner's proposed combination.

To establish a *prima facie* case of obviousness, for a rejection of claims under 35 U.S.C. § 103, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary

skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See the *Manual of Patent Examining Procedure* (M.P.E.P.) §§ 706.02(j) and 2143. If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

The claim 1, as amended, sets forth incorporate at least some of the features set forth in claim 3. That is, the claim 1 as amended sets forth “the first hole portion having a shape selected from among circular and elongated”. These features are not taught by the Examiner's proposed combination of Chen in view of Say.

Chen states that the aperture 114 is “circular” (col. 9, line 9). Chen does not teach or suggest that the aperture 114 is “elongated”.

Say's Figure 8 shows that the aperture 95 is circular and not elongated (see Figure 8). Say does not teach or suggest that the aperture 95 is “elongated”.

In Paper No. 8, the Examiner does not address the aforementioned deficiencies of Chen and Say. The Examiner has not demonstrated a *prima facie* case of obviousness regarding “the first hole portion having a shape selected from among circular and elongated” as set forth in

claim 1, as amended.

The claim 3, as originally filed, sets forth “the first hole portion having one shape selected from among circular and elongated”. The claims 8 and 9, as originally filed, set forth “the first hole portion having one shape selected from among circular and rectangular”.

The Examiner's § 102 rejection of claim 3 in Paper No. 4 was believed to be improper because the Examiner did not demonstrate that the cited art described or taught the features set forth in claim 3 (as originally filed) relating to the term “elongated”. Also, the Examiner's § 103 rejection of claim 3 in **Paper No. 8** is believed to be flawed for the same reason. In Paper Nos. 4 and 6, the Examiner refrains from addressing these features of claim 3, as originally filed. In this amendment, related features are incorporated into claim 1.

The Examiner's § 102 rejection of claim 3 in Paper No. 4 was believed to be improper because the Examiner did not demonstrate that the cited art described or taught the features set forth in claim 8 (as originally filed) relating to the term “rectangular”. Also, the Examiner's § 103 rejection of claim 8 in **Paper No. 8** is believed to be flawed for the same reason.

The Examiner's § 102 rejection of claim 9 in Paper No. 4 was believed to be improper because the Examiner did not demonstrate that the cited art described or taught the features set forth in claim 9 (as originally filed) relating to the term “rectangular”. Also, the Examiner's §

103 rejection of claim 9 in **Paper No. 8** is believed to be flawed for the same reason.

When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). See also *Al-Site Corp. v. VSI Int’l*, 174 F.3d 1308, 1324, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999). In that case, the Federal Circuit held that a claim was not shown to be obvious from the Seaver patent. The reason was that “although the Seaver patent discloses some of the elements recited in the Magnivision patents' claims, it does not disclose the display member, the cantilevered support, or the aperture for mounting the hanger tag on the cantilevered support,” and the art of record did not suggest adding those elements to Seaver.

Here, the Examiner does not demonstrate how the proposed combination of Chen in view of Say teaches the “elongated” features set forth in claim 3 (as originally filed). Also, the Examiner here does not demonstrate how the proposed combination of Chen in view of Say teaches the “rectangular” features set forth in claim 8 (as originally filed). Furthermore, the Examiner here does not demonstrate how the proposed combination of Chen in view of Say teaches the “rectangular” features set forth in claim 9 (as originally filed).

The Federal Circuit does not allow that in the case of a critical ground for rejection, as the shape is here. A reference *must* be cited for this *core* aspect of the rejection. Thus, in its 2 August 2001 opinion in *In re Zurko*, the Federal Circuit wrote:

Finally, the deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is "basic knowledge" or "common sense" to one of ordinary skill in the art. As described above, the Board contended that even if the cited UNIX and FILER2 references did not disclose a trusted path, "it is basic knowledge that communication in trusted environments is performed over trusted paths" and, moreover, verifying the trusted command in UNIX over a trusted path is "nothing more than good common sense." *Ex parte Zurko*, slip op. at 8. We cannot accept these findings by the Board. This assessment of basic knowledge and common sense was not based on any evidence in the record and, therefore, lacks substantial evidence support. As an administrative tribunal, the Board clearly has expertise in the subject matter over which it exercises jurisdiction. This expertise may provide sufficient support for conclusions as to peripheral issues. With respect to core factual findings in a determination of patentability, however, the Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings. To hold otherwise would render the process of appellate review for substantial evidence on the record a meaningless exercise. *Baltimore & Ohio R.R. Co. v. Aberdeen & Rockfish R.R. Co.*, 393 U.S. 87, 91-92 (1968) (rejecting a determination of the Interstate Commerce Commission with no support in the record, noting that if the Court were to conclude otherwise "[t]he requirement for administrative decisions based on substantial evidence and reasoned findings—which alone make effective judicial review possible—would become lost in the haze of so-called expertise"). Accordingly, we cannot accept the Board's unsupported assessment of the prior art.

The Applicants respectfully submit that what is appropriate for the Board is certainly appropriate for the Examining Staff as well. Chen and Say must be supplemented by a cited reference, the Applicants respectfully maintain, or else this rejection is not supported by

substantial evidence and must be withdrawn.

It is respectfully believed that the Examiner has not demonstrated that the teachings of Chen and Say satisfy the requirements set forth in 35 U.S.C. § 103 and M.P.E.P. § 2143 regarding a rejection of claims based on obviousness, in view of the amendments to claim 1.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned first basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there is some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at the Applicants' claimed invention as set forth in claim 1, as amended.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned second basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there would be a reasonable expectation of success as a result of the Examiner's proposed combination of cited art.

Furthermore, with reference to Chen and Say, it is respectfully believed that the aforementioned third basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that Chen and Say

teach or suggest all the claim limitations of claims 1-10, as currently amended.

The Applicants respectfully submit that the foregoing demonstrate that no *prima facie* case of obviousness has been shown, and also demonstrate that no *prima facie* case of obviousness can be shown with reference to Chen and Say, regarding claims 1-10, as currently amended. In view of the noted deficiencies of Chen and Say, and the unlikely combination/modification as proposed, the Applicants respectfully request that the rejection of claims 1-10 be withdrawn.

Accordingly, in view of the foregoing remarks and amendments, the Applicants respectfully request that claims 1-10 be allowed.

2. Claim 13

The Examiner rejects claim 13 “under 35 U.S.C. 103(a) as being anticipated by Chen ... in view of Say” (Paper No. 8, p. 2). The Applicants have amended claim 13 to incorporate at least some of the features set forth in claim 19.

The Applicants respectfully submit that claim 13, as amended, is patentable over the Examiner's proposed combination of Chen and Say because that combination does not teach or suggest “the first hole portion having one shape selected from among circular, elongated, and square” as set forth in claim 13, as amended.

When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). Regarding claim 13, as amended, the Examiner's proposed combination of Chen and Say does not disclose *all of the elements* of the invention.

The Applicants respectfully believe that the rejection of claim 19 in Paper No. 8 is improper because the Examiner's proposed combination of Chen and Say fails to teach “the first hole portion having one shape selected from among ... square” as set forth in claim 19 (as originally submitted).

At least some of the features of claim 19, as originally filed, have been incorporated into claim 13, as currently amended.

The Applicants respectfully submit that the Examiner's proposed combination of Chen and Say fails to teach the aforementioned features of claim 13, as currently amended. The Examiner's proposed combination of Chen and Say do not teach a square shape, as set forth in claim 13, as currently amended, for example.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned first basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there is some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at the Applicants' claimed invention as set forth in claim 13, as amended.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned second basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there would be a reasonable expectation of success as a result of the Examiner's proposed combination of cited art.

Furthermore, with reference to Chen and Say, it is respectfully believed that the aforementioned third basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that Chen and Say teach or suggest all the claim limitations of claim 13, as currently amended.

The Applicants respectfully submit that the foregoing demonstrate that no *prima facie* case of obviousness has been shown, and also demonstrate that no *prima facie* case of obviousness can be shown with reference to Chen and Say, regarding claim 13, as currently amended. In view of the noted deficiencies of Chen and Say, and the unlikely

combination/modification as proposed, the Applicants respectfully request that the rejection of claim 13 be withdrawn.

For all of the foregoing reasons, including the reasons presented above regarding the improper obviousness rejection of claim 1 where applicable, the Applicants respectfully believe that the Examiner has not established a *prima facie* case of obviousness regarding claim 13, as amended.

Accordingly, the Applicants respectfully request that the Examiner allow claim 13, as currently amended.

3. Claim 18

The Examiner rejects claim 18 “under 35 U.S.C. 103(a) as being anticipated by Chen ... in view of Say” (Paper No. 8, p. 2). The Applicants have amended claim 18 and have incorporated at least some of the features set forth in claim 1.

The Applicants respectfully submit that claim 18, as amended, is patentable over the Examiner's proposed combination of Chen and Say because that combination does not teach or suggest “the first hole portion having one shape selected from among circular, elongated, and square” as set forth in claim 18, as amended.

When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). Regarding claim 18, as amended, the Examiner's proposed combination of Chen and Say does not disclose *all of the elements* of the invention.

The Applicants respectfully believe that the rejection of claim 18 in Paper No. 8 is improper because the Examiner's proposed combination of Chen and Say fails to teach “the first hole portion having one shape selected from among ... square” as set forth in claim 18 (as originally submitted).

At least some of the features of claims 1 and 18, as originally filed, have been incorporated into claim 18, as currently amended.

The Applicants respectfully submit that the Examiner's proposed combination of Chen and Say fails to teach the aforementioned features of claim 18, as currently amended. The Examiner's proposed combination of Chen and Say do not teach a square shape, as set forth in claim 18, as currently amended, for example.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned first basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there is some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at the Applicants' claimed invention as set forth in claim 18, as amended.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned second basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there would be a reasonable expectation of success as a result of the Examiner's proposed combination of cited art.

Furthermore, with reference to Chen and Say, it is respectfully believed that the aforementioned third basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that Chen and Say teach or suggest all the claim limitations of claim 18, as currently amended.

The Applicants respectfully submit that the foregoing demonstrate that no *prima facie* case of obviousness has been shown, and also demonstrate that no *prima facie* case of obviousness can be shown with reference to Chen and Say, regarding claim 18, as currently amended. In view of the noted deficiencies of Chen and Say, and the unlikely

combination/modification as proposed, the Applicants respectfully request that the rejection of claim 18 be withdrawn.

For all of the foregoing reasons, including the reasons presented above regarding the improper obviousness rejection of claim 1 where applicable, the Applicants respectfully believe that the Examiner has not established a *prima facie* case of obviousness regarding claim 18, as amended.

Accordingly, the Applicants respectfully request that the Examiner allow claim 18, as currently amended.

4. Claim 19

The Examiner rejects claim 19 “under 35 U.S.C. 103(a) as being anticipated by Chen ... in view of Say” (Paper No. 8, p. 2). The Applicants have amended claim 19 and have incorporated at least some of the features set forth in claims 13 and 14.

The Applicants respectfully submit that claim 19, as currently amended, is patentable over the Examiner's proposed combination of Chen and Say because that combination does not teach or suggest the focusing electrodes as set forth in lines 10-20 of claim 19, as currently amended.

When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). Regarding claim 19, as amended, the Examiner's proposed combination of Chen and Say does not disclose *all of the elements* of the invention.

At least some of the features of claims 13 and 14, as originally filed, have been incorporated into claim 19, as currently amended.

The Applicants respectfully submit that the Examiner's proposed combination of Chen and Say fails to teach the aforementioned features of claim 19, as currently amended. The Examiner's proposed combination of Chen and Say do not teach the first plurality of focusing electrodes, the second plurality of focusing electrodes, the additional focusing electrode forming a first quadrupole lens, and the next focusing electrode forming a second quadrupole lens, as set forth in claim 19, as currently amended, for example.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned first basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there is some suggestion or

motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at the Applicants' claimed invention as set forth in claim 19, as amended.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned second basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there would be a reasonable expectation of success as a result of the Examiner's proposed combination of cited art.

Furthermore, with reference to Chen and Say, it is respectfully believed that the aforementioned third basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that Chen and Say teach or suggest all the claim limitations of claim 19, as currently amended.

The Applicants respectfully submit that the foregoing demonstrate that no *prima facie* case of obviousness has been shown, and also demonstrate that no *prima facie* case of obviousness can be shown with reference to Chen and Say, regarding claim 19, as currently amended. In view of the noted deficiencies of Chen and Say, and the unlikely combination/modification as proposed, the Applicants respectfully request that the rejection of claim 19 be withdrawn.

For all of the foregoing reasons, including the reasons presented above regarding the improper obviousness rejection of claim 1 where applicable, the Applicants respectfully believe that the Examiner has not established a *prima facie* case of obviousness regarding claim 19, as amended.

Accordingly, the Applicants respectfully request that the Examiner allow claim 19, as currently amended.

5. Claim 20

The Examiner rejects claim 20 “under 35 U.S.C. 103(a) as being anticipated by Chen ... in view of Say” (Paper No. 8, p. 2). The Applicants have amended claim 20 and have incorporated at least some of the features set forth in claim 21.

The Applicants respectfully submit that claim 20, as amended, is patentable over the Examiner's proposed combination of Chen and Say because that combination does not teach or suggest “the first hole portion having one shape selected from among circular, elongated, and square” as set forth in claim 20, as amended.

When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 or under § 103. *In re Lowry*, 32 F.3d

1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). Regarding claim 20, as amended, the Examiner's proposed combination of Chen and Say does not disclose *all of the elements* of the invention.

The Applicants respectfully believe that the rejection of claim 21 in Paper No. 8 is improper because the Examiner's proposed combination of Chen and Say fails to teach “the first hole portion having one shape selected from among ... square” as set forth in claim 21 (as originally submitted).

At least some of the features of claim 21, as originally filed, have been incorporated into claim 20, as currently amended.

The Applicants respectfully submit that the Examiner's proposed combination of Chen and Say fails to teach the aforementioned features of claim 20, as currently amended. The Examiner's proposed combination of Chen and Say do not teach a square shape, as set forth in claim 20, as currently amended, for example.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned first basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there is some suggestion or

motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at the Applicants' claimed invention as set forth in claim 20, as amended.

Also, with reference to Chen and Say, it is respectfully believed that the aforementioned second basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that there would be a reasonable expectation of success as a result of the Examiner's proposed combination of cited art.

Furthermore, with reference to Chen and Say, it is respectfully believed that the aforementioned third basic criterion of a *prima facie* case of obviousness will not be able to be established by the Examiner because the Examiner will be unable to show that Chen and Say teach or suggest all the claim limitations of claim 20, as currently amended.

The Applicants respectfully submit that the foregoing demonstrate that no *prima facie* case of obviousness has been shown, and also demonstrate that no *prima facie* case of obviousness can be shown with reference to Chen and Say, regarding claim 20, as currently amended. In view of the noted deficiencies of Chen and Say, and the unlikely combination/modification as proposed, the Applicants respectfully request that the rejection of claim 20 be withdrawn.

For all of the foregoing reasons, including the reasons presented above regarding the improper obviousness rejection of claim 1 where applicable, the Applicants respectfully believe that the Examiner has not established a *prima facie* case of obviousness regarding claim 20, as amended.

Accordingly, the Applicants respectfully request that the Examiner allow claim 20, as currently amended.

A fee of \$420.00 is incurred by the addition of five (5) independent claims in excess of 3. Applicant's check drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

In view of the above, it is submitted that the claims of this Application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicants' attorney.

Respectfully submitted,



Robert E. Bushnell,
Attorney for the Applicant
Registration No.: 27,774

1522 "K" Street N.W., Suite 300
Washington, D.C. 20005
(202) 408-9040

Folio: P56631
Date: 9/25/03
I.D.: REB/DC